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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,654	08/28/2003	Richard L. Wilson	03198-PA	7277

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EXAMINER

WITHERSPOON, SIKARL A

ART UNIT

PAPER NUMBER

1621

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/650,654

Applicant(s)

WILSON, RICHARD L.

Examiner

Sikarl A. Witherspoon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/28/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1-5, 9-14, and 18-23 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-6, 18, and 20-32 of prior U.S. Patent No. 5,792,893. This is a double patenting rejection.

Claims 1-5, 9-14 and 18-23 are directed to the same invention as that of claims 1-6, 18, and 20-32 of commonly assigned US 5,792,893. The issue of priority under 35 U.S.C. 102(g) and possibly 35 U.S.C. 102(f) of this single invention must be resolved.

Since the U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302), the assignee is required to state which entity is the prior inventor of the conflicting subject matter. A terminal disclaimer has no effect in this situation since the basis for refusing more than one patent is priority of invention under 35 U.S.C. 102(f) or (g) and not an extension of monopoly.

Failure to comply with this requirement will result in a holding of abandonment of this application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 9-14, and 18-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilson et al (US 5,792,893).

Wilson et al disclose a process for producing 1,1,1,3,3,3-hexachloropropane by reacting tetrachloromethane (carbon tetrachloride) with 1,1-dichloroethene in the presence of a catalyst comprising copper, and a solvent selected from a C3 to C5 alkanenitrile (abstract). The catalyst is either cuprous chloride or cupric chloride, and the solvent may be propanenitrile, butanenitrile, pentanenitrile, or 2-methylpropanenitrile or 3-methoxypropanenitrile (col. 3, lines 24-40). The process may be conducted in the batch, semi-batch, or continuous mode. Column 4, line 50 to column 5, line 53 discloses the separation and purification of 1,1,1,3,3,3-hexachloropropane. The process disclosed by Wilson et al anticipates the instant claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-8, 15-17, and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asscher et al (US 3,651,019) and Wilson et al (US 5,792,893) in combination.

The instant claims are drawn to a process for preparing 1,1,1,3-tetrachloropropane by contacting carbon tetrachloride with ethane in the presence of copper catalyst components, and n-butyronitrile co-catalyst, wherein the reactor operates at a temperature of 100 to 180° C and a pressure of 80-400 psig for 0.20 to 200 hours, with a butyronitrile concentration of 10-50 wt %; distilling the reaction mixture, separating the copper catalyst and purifying the liquid to obtain purified 1,1,1,3-tetrachloropropane; dissolving the precipitated copper catalyst in the recovered butyronitrile co-catalyst, and returning a portion of the catalyst solution to the reactor.

Asscher et al teaches a process for the production of adducts of carbon tetrachloride (or chloroform) with olefinically unsaturated compounds at temperatures from 20 to 300° C; the catalyst comprises a dissolved copper or iron compound. The olefinically unsaturated reactant is selected from compounds such as ethylene, propylene, and vinyl chloride (col. 5, lines 58-70). Cupric chloride or cuprous chloride may be employed as catalyst. Solvents, such as acetonitrile may be employed to directly dissolve the metal compound. Example 2 teaches the reaction of carbon tetrachloride and ethylene to produce 1,1,1,3-tetrachloroethane. The reaction is conducted for 12 hours at about 100° C, and a pressure in the range of 600 to 1200 psi,

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with distillation of solvent and residual product reaching a final temperature of 190° C (col. 9, line 57 to col. 10, line 6).

As stated above, Wilson et al teach a process for producing 1,1,1,3,3,3-hexachloropropane by reacting tetrachloromethane (carbon tetrachloride) with 1,1-dichloroethene in the presence of a catalyst comprising copper, and a solvent selected from a C3 to C5 alkanenitrile (abstract). The catalyst is either cuprous chloride or cupric chloride, and the solvent may be propanenitrile, butanenitrile, pentanenitrile, or 2-methylpropanenitrile or 3-methoxypropanenitrile (col. 3, lines 24-40). The process may be conducted in the batch, semi-batch, or continuous mode. Column 4, line 50 to column 5, line 53 discloses the separation and purification of 1,1,1,3,3,3-hexachloropropane.

The differences between Asscher et al and the instant invention is that Asscher et al do not teach the separation and purification steps claimed in the present invention, and do not teach the use of butyronitrile. However, Wilson et al teach steps for the separation and purification of haloalkanes formed from carbon tetrachloride and an olefinic compound, and Wilson et al also teach the use of alkanenitriles such as butanenitrile.

It would have been obvious to a person of ordinary skill in the art, at the time the present invention was made to employ the separation and purification steps taught by Wilson et al, in the process taught by Asscher et al. One of ordinary skill would have been motivated to so combine the reference teachings by the desire to separate the catalyst and solvent from the desired haloalkane product, in order to be able to recycle

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said catalyst and solvent to the reactor, in order to achieve a more sufficient process, and obtain maximum recovery of the haloalkane product.


It also would have been obvious to substitute another organonitrile solvent, such as butanenitrile, as taught by Wilson et al, for the acetonitrile solvent that may be employed in the process taught by Asscher et al, since Wilson et al teach that use of solvents such as acetonitrile result in the formation of hard solid chunks, while superior results can be obtained using a C3 to C5 alkanenitrile, that when mixed with the copper catalyst, form homogeneous solutions or fine slurries, that are especially easy to transfer to the reactor (Wilson et al, col. 2, lines 45-55).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikarl A. Witherspoon whose telephone number is 571-272-0649. The examiner can normally be reached on M-F 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, reading "Sikarl A. Witherspoon" with a horizontal line extending from the end.

Sikarl A. Witherspoon
Patent Examiner
Technology Center 1600